523.7
.R72
O.L.

A New Cosmology.

A/1/80

Writ 2165.9.

D.K.R. Rogers

H. R. Rogers.
Dunkirk.
N.Y.

510 Central Avenue,
Dunkirk. N.Y.
Dec. 10th 1896.

S. P. Langley.
Secretary of the Smithsonian
Institution. Washington. D. C.

Dear Sir

The enclosed Essay is respectfully presented in support of my claim to original discoveries in the field of Cosmical Science. It presents a wholly new explanation of the nature, the source, and the mode of development of the Universal Force, and opens up a new revelation in regard to the atmosphere. The facts and philosophical principles therein advanced constitute a sufficient basis for a new philosophical system, a true Unitary Science.

The atmosphere when viewed in the light of this Essay, receives new interpretations both in regard to its composition, and its functions. No longer may our atmosphere be regarded simply as a collection of a few passive ingredients, but rather,

as in and of itself, a vast substantial mass, necessarily acting and retro-acting in conjunction with the Sun, through the medium of the currents of the terra-solar circuit. Through these electrical inter-actions its great Cosmical phenomena become developed.

In view of discoveries of such vast and fundamental import, I claim to have accomplished very much for:- "the increase and diffusion of more exact Knowledge in regard to the nature and properties of the atmosphere in connection with the welfare of man," as called for in the generous donation to Science of Thomas George Hodgkins Esq. of Setauket N.Y.

I therefore ask your special attention to this Essay, with the hope and confident expectation that just and adequate compensation will be awarded me from that fund.

Very Respectfully Your Obt Servant,

H. R. Rogers.

THE SUN NOT WHAT IT APPEARS TO BE.

A New Cosmology.

An Essay read before the Chautauqua Society of History and Natural Sciences, July 24th, I896.

By

HENRY RAYMOND ROGERS, M.D.

Dunkirk, N.Y.

Never did the sun seem a greater mystery than today, and never did the theories concerning it appear so irrational, inadequate, and unsatisfactory. The present accepted philosophy consigns our glorious sun to the ignoble and menial position of "furnace, and "torchlight", for the earth alone. Thus the sun, a body a million and a quarter times larger than the earth, is relegated to a position in the great cosmical scale far below our diminutive sphere. Certainly this is a stupendous error, and calls for a philosophy that shall accord to that body the supreme dignity, and pre-eminence, to which it is entitled by reason of its magnitude, its exalted functions, and its position as the ruler of our solar system.

An intelligent study of the sun reveals a new principle in cosmical science, even the highest which man today may contemplate, viz: an electrical relationship between the sun and

DSI

SMITHSONIAN INSTITUTION
MAY 25 1949
OFFICE LIBRARY

MSS
1723 B
SCDIRB

the earth, and between all the starry worlds, as celestial dynamos, incessantly acting and retro-acting throughout the universal space, according to the recognized laws of electrical science. All the factors and elements of electrical action are distinctly involved, compelling us to the electrical interpretation of all cosmical phenomena. These vast dynamos of the skies, in no wise differ from the dynamo of men's construction, save in form and magnitude. The merely superficial appearances of our great sun-dynamo, i.e. its heat and dazzle, have deceived and misled mankind during all past ages, and prevented its true condition and functions from being appreciated.

The rays of the mid-summer's sun are burning to the human skin, and dazzling to the human eye, and, led by these superficial appearances the world says:- "the sun is hot; the sun is bright". During all the past centuries and today as well, even the profoundest philosophic minds continue to assert that the sun is incandescent, or white-hot, and of a dazzling brilliancy. The astronomer who is given to publishing monographs, or text-books on his favorite science, in his pictorial illustrations represents that body as bright, with light rays radiating in all directions into space. For example, the bright lines seen in plate I. imply that actual heat and light, developed within the body of the sun, "radiate" outwards from

it, through billions of miles of distance into the vast surrounding space. Of this heat the earth receives but one 250,000,000,000th part, the remainder being mainly dissipated and practically useless; the most stupendous wastefulness which science permits us to contemplate. The heat of this sun of science is estimated at millions of degrees. (Fah^{r}).

But this "fire-ball" explanation of the sun, while true in

The sun of past ages;

The Sun of Science Today.

Pl. I.

its seeming, yet stands wholly disproved by an abundance of demonstrable facts.

The mountain-tops covered with perpetual snow and ice, have stood for ages as monumental evidences that cold rapidly increases in the direction of the sun. The aeronant's experience confirms the evidence of the mountain-tops. He tells us that at one and a half miles upwards in this latitude, snow and ice never melt, and that at seven miles, the highest point yet

reached by man, the temperature was found at ~~ten~~ (12) degrees below zero, near mid-summer. An automatic thermometer sent up in a captive balloon, registered 104 degrees minus, at an elevation of ten miles. The best authorities in this field variously estimate the cold of space at from hundreds to millions of degrees below zero. Secchi says, eighteen million degrees.

But heat and cold are incompatibles and cannot co-exist in space, so that no heat can come from the sun through 93,000,000 miles of such intense cosmical coldness. It is most reasonable to suppose, as will be shown hereafter, that like the earth, it derives all necessary heat from retro-actions in operations outside of, and beyond itself.

The so-called sunlight is due to the same causes as sun-heat, and subject to the same laws; it therefore diminishes in the same ratio sunward. At one and a half miles upwards the diffused light of the atmosphere is found upon measurement only one-tenth to one-twentieth as great as at the surface of the earth. At three and a half miles the sun's light has diminished so rapidly and become so weak that the spectroscope fails to produce the rainbow colors of the solar spectrum, "only the yellow being seen and that, too, without lines". (Janssen). At seven miles we learn that the sun's showy plumage, its dazzle and brilliancy, are not its own, but only borrowed. At this elevation this monarch of our solar system is shorn of all heat and brilliancy and becomes an object most strange and pitiful

to behold, since it appears no brighter than our moon. Flammarion, the distinguished writer upon the subject of the atmosphere thus testifies:-"Outside of the shining atmospheric envelope of each celestial sphere there is only the black of infinite space". He does not believe that all space is lighted up, as is universally imagined, but rather that all space beyond our atmosphere is utter darkness. It is therefore essential to understand that light rapidly diminishes sunward. With

The Sun of the Future.-

And Its Surroundings.

Pl. II.

this fact before us science becomes wonderfully simplified.

Plate II. presents the sun in its true character and relations, surrounded by darkness and stars. No light can leave that body in any direction through such darkness of space.

Since only one of these plates can be true, it now becomes important to determine which is the correct representation of that body. Either the sun is incandescent and of dazzling brilliancy, or it may be even cool, dark and habitable,

covered with mountains, oceans, forests, fields and streams, and filled with life, intelligence and beauty, and still heat the earth and light it the same as it now does, through some hitherto unrecognized process. This question must be settled soon, and forever. As plate II. is now found demonstrably correct, this "fire-ball" sun of science becomes an impossibility, an absurdity.

Plate II. therefore becomes classical in its teachings. It reveals a higher, grander cosmical truth than science has ever asserted, viz: that some great principle, or energy, which is neither essentially hot, nor bright, passes invisible and free, to and fro between the sun and earth, and between all the stars of the heavens, and quickens the atmosphere of each and every star-world into heat light and power.

Then what is this unique creation, this very soul of the universe which passes through 93,000,000 miles of inconceivable cold and darkness of space, and awakens our distant atmosphere to its gentle heat and light, and which thus threatens to overturn our present system of cosmical philosophy? What electricity is essentially is not known. While it is apparently as tenuous as Spirit, it is nevertheless real and substantial. It may be amassed, condensed and rarified; mass, condensation, and rarefaction, being conditions inseparable from matter. Electricity, therefore, is substantial. Electricity is not a self-existent entity. Whether acting between star-worlds, or atoms,

it does its work, passes on, and must be incessantly renewed.No medium of transmission is required.

Electricity, as the universal energy, was first demonstrably revealed to man three hundred years ago by James Metius, a Hollander, a maker of lenses and the inventor of telescopes with glasses. He constructed a lens from a block of ice and with it converged the rays of the sun to a focus and set fire to combustibles. Most marvelous! No particle of actual heat could have passed through the lens of ice. The little lens of ice of Metius thus revealed the character of the universal principle, or force, and stamped it, we now can see, as electrical. A volume of light is embodied in this fact. We now learn that electricity can pass instantaneous and invisible from sun to earth through the cold and darkness of space, giving no sign of its passage, and that having arrived at its terrestrial destination it awakens our atmosphere to heat, light, and power.

The time has now arrived for enlarging the field of application of the principles of electrical science. We must recognize the fact that the electrical laws which hold here on this earthly platform, hold also throughout the universal domain, and that our study of practical electricity has been the study in miniature of the grand operations of celestial worlds.

Electricity can be judged only by what it does. Terrestrial electricity in the hands of Edison, the wizzard, and Bell, Gray, Thompson and others, is made to perform startling wonders; and a Tesla reveals its activities on a higher, broader scale,

which points to the solution of many dynamic and industrial problems of the age. But today electricity is opening up in its grandest rôle, on the scale of the universe i.e. as The Universal force. It is the power that holds all worlds and the atoms of which worlds are composed, in all their due relations, and it heats and lights the universe of stars.

A supply of electrical energy equal to the demands of the sun, the earth, and all the starry host, must now be account-ed for; and this is not a difficult problem to solve, since the universal force is now found to be due to, the energy of celestial motion; in other words, the power of the universe is embodied in the motions of the celestial dynamos.

The earth-dynamo is filled to repletion with magnetic energy, and its atmosphere is a vast magnetic reservoir, more magnetic than any substance except iron, nickel and cobalt. This magnetic, or electrical principle, moves with entire freedom throughout the earth and atmosphere. The earth contains 250,000,000,000 cubic miles of matter, rotating with an axial motion of 25,000 miles per day. Its potential energies are thus indicated by its mass, and the velocity of its motions. The sun-dynamo is a million and a quarter times larger than the earth, and its motion upon its axis is nearly 100,000 miles per day. So all the stars are rotating dynamo-magnets "polarized in immensity".

Motion on the scale of the laboratory, or the workshop,

reveals magical and startling effects. The motion of a jet of air with a velocity of five miles per minute, instantly dissolves a bar of iron one inch in diameter; such a bar is melted by the most intense heat only after several minutes. A circular disc of thin sheet iron, or steel, forty-two inches in diameter, revolving upon an axis with the motion of five miles per minute, will quickly cut off a bar of hardened polished steel three inches in diameter, without touching the bar which it severs; the bar turning in the opposite direction. The drops of liquid steel which fall from the cut are not hot. In the motion of the whirling armature of a common dynamo, it touches nothing while it revolves, yet it is capable of developing vast powers at great distances. The word motion now takes on a new and increased significance in science. The motions of the stupendous star-masses, with their inconceivable velocities, never have been made sufficient account of, in the cosmical problem. To estimate the dynamic energy embodied in a mass in motion, its weight in pounds may be multiplied by its velocity in feet per second. This rule applies alike to stars and cannon-balls. If the electrical energy of a magnet be estimated by its size, and the velocity of its motions, what shall we say of the whirling, flying, star-dynamos of vacuous space? It is only in view of such stupendous results of the celestial activities that the principle, motion, may attain to its true position in the great cosmical scale. A rotating sun now takes the place of a "burning" sun in the cosmical problem. The whirling sun, like the

whirling earth, may be filled with inhabitants, while a hot, or "burning" sun, would be useless. Our sun and the millions of star-suns may, therefore, be inhabited.

Fire is an engine of destruction, and such an enormous development of heat as claimed for that body, i.e. 5,000,000 degrees (Fah^{r}), would be followed by rapid disintegration, with a consequent loss of magnitude and power on the part of the sun. Thus science is persistently teaching that the sun is wasting away, drained by the stupendous "radiations", or "emissions", which it constantly sends forth in all directions into the celestial spaces. But there are abundant and positive evidences that the sun never has lessened in its diameter, nor diminished in its energies. The following evidences of these facts are incontrovertible, viz:-

1st- The distance between the sun and the earth never has changed perceptibly;

2nd- The so-called sunheat and sunlight have not sensibly diminished;

3rd- The calculations of eclipses are made with exactness for centuries backwards and forwards.

These demonstrations are certainly conclusive. The sun is neither "burning", "contracting", nor in any discernible manner changing its conditions.

The earth if motionless; would possess no magnetic activity. So the sun, if isolated and motionless in space, would possess no more essential energy than a microbe. It would not

heat and light a kitchen. But if to such an isolated and quiet sun and earth be added motion, they would thereby become aroused to activity, and work together, like two vast celestial dynamos that they are. Through the motions of suns, and stars, is developed an amount of energy equal to the demands of a universe. Thus, motion is the master-element in cosmical science.

Aristotle, the so-called, "Father of Science", held the conception that all force is due to motion, the impulse of the motions of the heavenly bodies. He could not prove his speculations to be true, and they have waited 2300 years for their demonstration, but today, his words shine forth as words of prophesy.

It is a principle in electrical science that bodies moving, or revolving, near each other, develop electrical currents which pass from one to the other. Upon this principle man's dynamo is constructed. This principle applies, as well, to celestial bodies, in motion. The sun and the earth rotating with great velocity, develop electrical currents which pass instantaneously and incessantly, to and fro in a circuit. All space is vacuous save to the presence of electrical currents and these do not impede the movements of celestial bodies. Distance so far as electrical action is concerned, thus becomes virtually annihilated, and the stars as if standing side by side.

The action of force at a distance, without a medium of transmission as in the case of sunheat, sunlight, gravity, etc. has puzzled philosophers in all ages, and science gives no sat-

isfactory explanation of these phenomena today, but in the light of the electrical theory of force, the solution of this problem becomes exceedingly simple. Thus the transfer of energy between celestial masses is direct, and retro-active. For example, if the lines (a) and (b), Plate III. be drawn from sun to earth, tangent to both, these lines will enclose a tapering space with the sun at the big end, and the earth at the small end, giving to the space enclosed the form of a truncated-cone. Within this solar cone, or cone-space, all the phenomena of heat, light, gravity, etc. are produced through the medium of the electrical circuit. The currents of this circuit come from the

Solar-Cone, or Cone-Space.

Pl. III.

sun invisible and free and meet their first resistance in our atmosphere. In the conflict between the electrical sun-currents and the magnetic atmosphere, both the currents and the atmosphere become aroused to heat and light. Our atmosphere thus acts the part of a vast carbon, an aerial blanket carbon, so to speak, which does not differ from the "carbon" and "coil" of

the electric-light plant, otherwise than in form and dimensions. Our so-called sunheat and sunlight, therefore are developed in the lowest strata of the atmosphere and are terrestrial phenomena, and not of the sun itself, as heretofore taught by science. The sun currents after developing heat and light in our atmosphere, proceed onward into the earth and perform therein yet vaster work, and from thence speedily return in their circuit to the sun in equal volume and power, and this, too, in accordance with the infallible law of Conservation of Force.

Solomon tells us:- "The wind returneth again according to its circuits. All the rivers run into the sea yet the sea is not full; unto the place from whence they came thither they return again". Science recognizes the immense movement of force from the sun to the earth, but has science recognized the fact that the earth is not full? Has it recognized the fact that back to the sun again, in some form or other, the rivers of energy must return in ceaseless circuit? And yet, the law of conservation demands it, and the electrical theory alone satisfies the demand. It is legitimate to infer that these return-currents on reaching the sun, perform identically the same functions at that body, as at the earth.

The sun and earth thus forming constituent parts in this terra-solar circuit, thereby become imbued with stupendous electrical powers. The relations of distance between these bodies are determined by polarity. The earth's South, or

negative pole, is nearest the sun on the 21st day of December, and they are then found in closest proximity, through electrical attraction. Six months later, on the 20th of June, both geographical and electrical relations are reversed, and they are found at their greatest distance apart, through electrical repulsion, 3,000,000 miles farther apart than in December. Gravity is thus demonstrably shown to be, purely an electrical phenomenon.

With the recognition of the foregoing process of development of the so-called sunheat and sunlight, the atmosphere begins a new history, a new career. It may no longer remain misrepresented as being merely a passive and mechanical receiver and transmitter of actual heat and light, developed at the sun itself, as heretofore supposed. This substantial "atmospheric envelope" of the earth performs the part of a vast magnetic mass, a part not exceeded in the practical and vital importance of its results, by any activity in operation within the whole field of cosmical philosophy, since life in its infinity of forms is dependent upon it. Hitherto, not even a suspicion has existed of the grandeur and importance of the functions performed by this magnetic constituent of the atmosphere in the celestial economy. Prepared by such knowledge of the constitution of the atmosphere, we can better comprehend the philosophy of the action of the great sun-current so incessantly moving earthward. This magnetic ingredient of the atmosphere there-

fore demands recognition, and imperatively calls for a reconstruction of the formula of the atmospheric constituents.

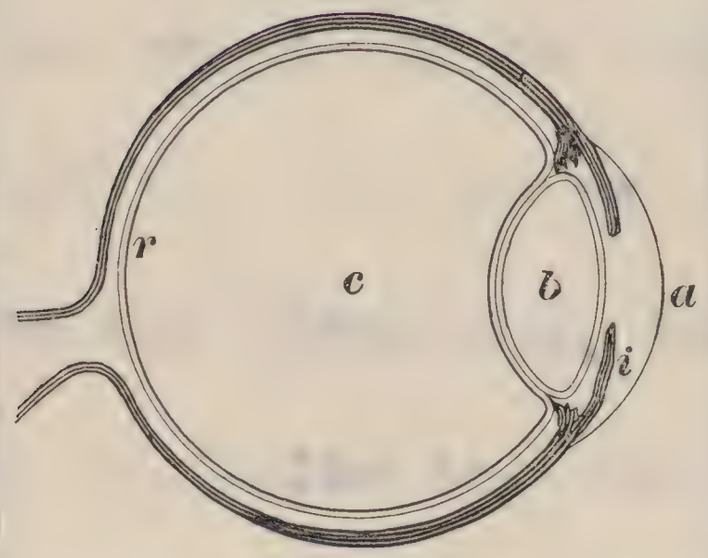
But what shall we say of the dazzle of the sun which is so real, and so painful to the human eye; this dazzle which has so deceived mankind, and perpetuated a false, absurd, and ridiculous philosophy of explanation of the sun and its phenomena? This dazzle cannot pass through the 93,000,000 miles of darkness which lie between the sun and earth; it is not found in our atmosphere, therefore, it must be located in the depths of the eye alone. This dazzle reaches its intensity at the retina through a process which has never been adequately described, but which today is not difficult to explain.

Electrical currents produce no visible effects when their passage is free and unimpeded. Resistance to the progress of these currents is requisite to arouse them to their greatest activity. Such resistance is found in "carbon" and "coil", and also in the retina. The electrical light-currents pass invisible and free from the sun to the retina, and the retina becomes such an object of resistance. As the result of such obstruction to the passage of these currents they become developed into blinding, dazzling effects.

That delicate optical instrument, the eye, performs another and most important part in the production of this dazzle. Plate IV. shows the eye to be composed of a series of

three separate and distinct lenses. The first of these lenses (a,) is formed of the convex cornea, together with the iris (i,) and the contained aqueous humor. This corneal lense gathers the rays of the electrical sun-currents which fall upon the eye, and converges them to a focus at the pupil. It also increases their power. These rays then pass through the double convex crystaline-lens (b,) which vastly increases their activities. From thence they become uniformly distributed over the retina (r,) by the concavo-convex vitreous body, or dispersing

The Eye.



Pl. IV.

lens, (c.). Here, upon this nerve-covered retina, the most striking and brilliant of all the effects of the sun are produced. The sun's dazzle is nowhere observed, except at the retina. In this fact is found a positive demonstration that the sun is not the location of the excessive brightness which appears so real at that point of view.

A distant star cannot arouse our atmosphere to actual

light through billions and trillions of miles of darkness, yet it does impress upon the retina a sense of brightness, in the form of a bright speck. Hundreds of these clearly defined star-specks simultaneously impress the small area of the retina when viewing the sky on a clear, dark night. If the millions of stars radiated actual light in all directions in the whole universe. and to all distances into space, there would be no darkness

Among the deceptive appearances apparently located at the sun is found the "corona", or "Glory", which seems like a bright halo around that body during an eclipse. This corona is not what it appears to be. The telescope, hitherto, has deceived us. In view of the teachings of the great Lick telescope, astronomer ~~Holden~~ Campbell says:- "There is no object in the heavens which we must not observe as if viewed for the first time. It has opened a new vista of the creation. It compels us to learn everything anew. Even the most familiar of supposed facts revealed by other telescopes, as of the moon, for example, are found in this great revelator to be not facts, but errors".

To the misleadings of the telescope, we may add others which arise from ocular imperfection. Our eyes deceive us. Thus, six astronomers, skilled in the use of the telescope, were observing an eclipse. Their special task was to picture the corona. According to the statement of one of their number:- "No one would guess that their drawings represented the same

object; no two having the least resemblance to each other".

When the photographic camera is turned in the direction of the corona, its brightness is found to be located between the earth and moon, and since there is nothing at the moon which is capable of producing this phenomenon, it must be that it is developed, only in our atmosphere. Mr. Lockyer says:- "I confess the conviction that the corona is nothing else than an effect due to the passage of sunlight through our atmosphere". The corona, therefore, may be classed as purely an electrical phenomenon.

Since "all physical phenomena, every form and manifestation of force without a single exception, may be traced to the mere transformation of electrical energy". (W.H. Preece, London's electrician), therefore, all other, so-called sun phenomena may be explained upon the electrical hyothesis.

We have seen that the energies of the sun are due to its motions, that its powers are electrical. The illustrations of the sun's methods lie around us in nature. The highest, truest conception of the sun is, that it works. It is not an idle object as it whirls on its axis and moves across the sky. It works by its motions, and it works electrically. Analogies in nature are its best interpreters. Thus, the Falls of Niagara work, they work through the motion of their falling waters, and they work electrically. They embody a force of millions of horse-power. The electrical energy derivable from the currents

of the Niagara River, if conveyed by a plant adequate to its transmission, would be capable of heating and lighting a city in China, or Japan; yet this river while thus capable of developing heat, light, and power, in such vast proportions, is of itself, neither hot, luminous or magnetic. Potential action generated by the motion of the little Niagara River, may produce heat, light, and power at vast distances from the seat of its activity, and what can be wrought artificially, and in a small way by the Falls of Niagara, surely may be done naturally in a stupendous fashion by the grand forces of the sun.

Since the highest attribute of a celestial world is habitability, the sun must be filled with life in its infinity of forms, and with all intelligences. It must possess every requirement suited to the necessities of its characteristic society. So also the millions of star-suns should be at least equal to the diminutive earth, in all that pertains to habitability.

In view of the foregoing facts and philosophy, it seems that no person possessed of a competent faculty of thinking and reasoning, can consistently claim that the sun "radiates" actual heat and light through 93,000,000 miles of inconceivable coldness, and "the black of infinite space". In the field of physical science therefore, the mere assumptions, and hypothetical make-shifts, which so largely have entered into the explan-

ations, of the past, must soon bow before the inductive methods of those great philosophers, Reason, and Demonstration.

The most brilliant and masterly discoveries recorded on the pages of science during the past half century, aye, during all the ages, are the "Unity" or "Identity", of the so-called forces, and the "Conservation of Force". According to these laws but one force exists in nature, and this force can be neither lost, wasted, nor diverted. These laws of the universal force decree what shall be the cosmical philosophy of the future. No theory can stand which is not in entire harmony therewith, yet, unfortunately, the cosmical system of today, stands in direct and unmitigated antagonism to these fundamental requirements. Electricity alone is found to answer every condition which these laws necessitate.

We have shown that the powers of the sun are purely electrical; that electricity acts instantaneously, whether occurring between stars, or atoms, whether passing through solid worlds, or empty spaces. The Electrical Energy thus stands forth conspicuously as the sovereign principle of the universe. In this fact a new sun is revealed.

Demonstrably, all force is one, all life is one, all worlds are held together and work together as one, the whole universe is a unit. A revolution in science therefore is inaugurated, a revolution which can have but one ending, viz: the establishment of a New, or Unitary Science. This unitary

science is founded upon the fact that substantial electrical currents instantaneously, and incessantly, pass to and fro between all celestial worlds.

A practical and logical inference which follows is, that the electrical currents of the terra-solar circuit, are as open to utilization for the performance of the world's work, as are the falling waters of the Niagara river, the tides and waves of the ocean, or the winds. The problem of the world's work therefore becomes a simple one, and its early solution awaits the inventive genius of man.

In conclusion, we have shown that the ever-burning sun of so-called, science is purely mythical and absurd. The sun's diameter, its mass, and its energies, never have been known to diminish an iota.

Since sunheat does not reach the distance of one mile above our heads, even in midsummer, it is therefore due to some local process which science never yet has asserted. The so-called, sunlight arises from the same cause and is subject to the same laws as sunheat, and therefore is possible only near the surface of the earth. Thus, the theory of a "fireball" sun is an unmitigated fallicy.

The dynamo-magnet sun of the Unitary Science meets every requirement of a true sun. Its invisible currents awaken our atmosphere to heat, light, and life-giving effects.

According to present theories, the sun is wasting, and

slowly but surely dying; no process for the renewal of its energies ever has been explained in the annals of science. But, according to the New, or Unitary Science, the sun is ever the same, ~~eternal in the heavens.~~ The source and mode of supply of its energies are demonstrably shown to be adequate and unchanging.

In the science of today, the sun is given no higher position than that of a mechanical "furnace", or "torchlight", while in the New Science, its position in the great cosmical scale is justly estimated by the grandeur, sublimity, and power, which necessarily must attach to it as the great center, and ruler, of our solar universe.

The Nebular Hypothesis.

A stigma upon science.

In the words of Flammarion, "the problem of creation is a great problem! The science of the stars is an immense science; its mission is to embrace the universality of created things! "

The Nebular Hypothesis was invented by Kant, the Metaphysician, with the design of solving this great problem of creation; of explaining the origin and constitution of the millions of star-suns and satellites which occupy the universal space. As this hypothesis now stands on trial as a cosmical philosophy of commanding importance, it demands our most intelligent and impartial consideration. If proved to be true, if it stand the test of rational demonstration, then must it be accepted. If proved fallacious, then, since it has so long dominated our scientific thought and conclusions, and furnished the very basis of our philosophies physical, metaphysical, and moral, it must be set aside as pernicious.

This hypothesis was invented to explain how the millions of star-suns, and stars, and moons of stars were made, but no pretense is offered for explaining the origin of the comets, which Kepler tells us are "more numerous in the skies

than fish in the ocean". The failure to consider so large and vital factor in the cosmical problem is a fatal defect in the hypothesis.

But Kant's life-work was mainly in the field of the unknowable, his data were thus uncertain. He really had but little faith in this thing of his own paternity. He even asserted that, it was evolved out of his own consciousness, and was founded, not upon observation, or calculation, but upon"the fitness of things".

The eminent Mathematician, Laplace, took Kant's hypothesis at a stage where half completed, and gave it a finish all his own. Kant's fog-born, fog-fed sun had then reached its greatest dimensions, i.e. billions of miles in diameter, and was ready to shed its rings. Up to this period it had been all Kantian, and his genius had suggested an indispensable nucleus. No nucleus, no hypothesis.

From this period in the history of Kant's Brobdignagian sun, the hypothesis of Kant, and that of Laplace took opposite directions, and became antagonistic and irreconcilable. If the one were true, the other of necessity must be false; and what today is most remarkable, is the fact that this divergence between these two separate and distinct hypotheses, is actually unrecognized by the large majority of scientists. These latter attribute to Laplace that which he condemns,

but which is a most vital element in that of Kant. This fact shows a most unaccountable carelessness on the part of scientists.

Very curiously Laplace gives expression to the same doubts in regard to the value of this hypothesis as did Kant, and in similar language, He said of it:- "I present this hypothesis with the distrust which everything ought to inspire that is not the result of "observation", or "calculation". Still more significant is the fact that in his great work, "L' Exposition du Systeme du Monde", written many years later, Laplace makes no illusion to it in the text of that work, wherein he would have given it a commanding place had he highly valued its worth. It is simply relegated to a foot-note. It thus becomes evident that what many scientists have seen fit to take in all seriousness, and to which they have delighted to attach Laplace's name, was to him but a passing speculation.

Scientists of a later date who have written on this subject have accepted for reality that which those masters presented speculatively. Without informing themselves concerning the foundations upon which this hypothesis rests, they have taken it wholly upon trust. This is not science.

A concise history of this hypothesis will prove of interest and value in this study. Science tells us that ages ago man looked upon the Milky-Way and queried if the stars

had not been formed of such materials as seemed to compose this bright arch, and if that which we now see, was not what remained after the stars were completed. Thousands of years later the brilliant and imaginative Bruno, that "Admirable Crichton of science, said:- yea, verily, before the stars were, the universal space was filled with just such a fiery fog of atoms, from which the sun, moon and stars were produced. But Bruno died ten years too soon:- before the newly invented telescope disproved these fanciful conceptions. He did not then know the temperature of space, which now is estimated at from hundreds to millions of degrees below zero; nor "the black of infinite space". Such cold and darkness of space were fatal to the theory of a universal fiery fog of atoms.

Two hundred years later Kant asserted a nucleus founded upon the theory of innate gravity. This theory was then, and is today attributed to Newton, but Newton himself roundly condemned it. Through the medium of this impossible nucleus, Kant worked up an impossible, homogeneous, fiery fog of atoms, into heterogeneous suns, and stars, and moons of stars, filled with life in its infinity of forms.

The astronomer today tells us that the Milky-Way nebula, larger than all the other nebulae of our skies combined, consists of I6,000,000 and more bright stars, apparently located

upon a clear, dark, back-ground; and that our own sun and solar system forms an integral part of this bright nebulous Milky-Way. We the inhabitants of the earth were born, and have ever lived in this the grandest nebula of them all, therefore we should no longer be deceived.

Thus, the nebular hypothesis had its origin in a figment of the imagination, was built up through a false interpretation of Newton's laws of gravity, and must soon disappear under the rays of the grand search-light of truth. Peace be to its manes.

The philosophic Geothe denounced the Nebular Hypothesis as, "the universality disseminated delirium of lunatics".

Henry Raymond Rogers, M. D.
Oswego.
N.Y.